

**UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF TEXAS  
HOUSTON DIVISION**

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WESTERNGECO L.L.C.,

Plaintiff,

v.

ION GEOPHYSICAL CORPORATION, ET AL.,

Defendants.

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) Civil Action No. 4:09-cv-1827  
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) Judge Keith P. Ellison  
)  
) ORAL ARGUMENT  
) REQUESTED  
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**ION GEOPHYSICAL CORPORATION'S  
MOTION FOR A NEW TRIAL**

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## **INTRODUCTION**

At trial in this case, plaintiff WesternGeco sought lost profits based on five patent claims. The jury awarded \$93.4 million in lost profits damages without allocating the amount among the claims. Since then, the Patent Trial and Appeal Board has invalidated four of these five claims, including every broad claim that covered the core streamer-steering technology that was the subject of much of the testimony at trial. The sole surviving claim (claim 23 of the '520 patent) covers one narrow embodiment of steering during vessel turns, when data generally are not collected. It is not directed to streamer steering generally and is not required in order to steer streamers during a survey. As the Federal Circuit held in remanding this case, given the post-trial invalidation of most of WesternGeco's claims, a new trial on damages must be ordered unless this Court "concludes that WesternGeco established at trial with undisputed evidence that '520 patent claim 23"—the sole surviving claim relevant to lost profits—"covers technology necessary to perform the surveys upon which the lost profits award is based." 913 F.3d 1067, 1075 (Fed. Cir. 2019). Because the undisputed evidence at trial does not establish that the technology covered by claim 23 of the '520 patent was necessary to the survey contracts, a new damages trial must be ordered.

## **NATURE AND STAGE OF THE PROCEEDINGS**

This case is before this Court on remand from the Federal Circuit. After a jury trial, WesternGeco received a damages award, including \$93.4 million in lost profits damages. As is relevant here, the Federal Circuit remanded to this Court to consider whether a new trial is warranted as to lost profits damages in light of the intervening invalidation of four of the five patent claims that could have formed the basis for the lost profits award.

## STATEMENT OF THE ISSUE

Should a new trial be ordered as to lost profits damages in light of the post-trial invalidation of four of the five claims that could have formed the basis of the lost profits award?

The governing standard, as set out by the Federal Circuit in the opinion ordering remand is: “The district court may deny a new trial on lost profits if, but only if, it concludes that WesternGeco established at trial with undisputed evidence that ’520 patent claim 23 covers technology necessary to perform the surveys upon which the lost profits award is based.” 913 F.3d 1067, 1075 (Fed. Cir. 2019).

## STATEMENT

1. Defendant ION manufactures seismic acquisition equipment used in marine seismic surveys, which search for oil and gas beneath the ocean floor. During a seismic survey, a vessel pulls an array of streamers with sensors that collect data to map the composition of the ocean’s subsurface geology. 913 F.3d 1067, 1070 (Fed. Cir. 2019). That information, in turn, helps discover oil and gas deposits beneath the ocean floor. *Id.* Controlling the position of streamers in the array is important to the quality of the data generated. *Id.* ION manufactured a device, the DigiFIN, that helps control the steering of streamers. *Id.* ION sold DigiFINs to surveying companies; these companies, in turn, used some of the DigiFINs, along with numerous other components and labor, to perform surveys for customers in the oil and gas industry (“E&P companies”). *See id.*; *see also* Ex. A (Trial Tr.) 182, 312-313.

WesternGeco also manufactured products used to steer streamers in marine seismic surveys. WesternGeco used the products to perform surveys itself for E&P companies. 913 F.3d at

1070; Ex. A, at 182, 300-301, 311. E&P companies contract for surveys to obtain data about subsurface geology. The companies demand high quality data as the deliverable from the contracts. *See* Ex. A, at 366-367, 1047, 2075, 2077, 2097.

2. a. In 2009, WesternGeco sued ION for patent infringement in this Court, alleging, *inter alia*, that ION had infringed various claims of four patents: U.S. Patent Nos. 7,080,607 (the '607 patent); 7,162,967 (the '967 patent); 7,293,520 (the '520 patent), together called the “Bittleston” patents; and 6,691,038 (the '038 patent), often referred to as the “Zajac” patent. Four of the claims, which have since been invalidated—claim 15 of the '607 patent, claim 15 of the '967 patent, and claims 18 and 19 of the '520 patent—broadly claim systems that enable streamer steering during a survey and key features of lateral steering technology. *See* 913 F.3d at 1075.<sup>1</sup>

Specifically, claim 15 of the '967 patent broadly claims a system consisting of global and local control systems to position streamers during a survey. Ex. B, at 86 (PTX002 at col. 12); *In re WesternGeco LLC*, 889 F.3d 1308, 1327-1329 (Fed. Cir. 2018), *petition for certiorari denied*, No. 18-861 (U.S. Feb. 19, 2019). Claim 15 of the '967 patent encompasses all systems in which streamer positioning devices steer seismic streamers with a global control system transmitting location information to the local control system on the positioning device to adjust the device. Ex. B, at 86 (PTX002 at col. 12). This distributed control system is used throughout any marine seismic survey in which streamer steering technology is used. *See* Ex. A, at 710-711.

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<sup>1</sup> In addition to claim 23 of the '520 patent, claim 14 of the Zajac '038 patent has not been invalidated. That claim, which addresses rarely conducted “time-lapse” surveys, was not the basis of the lost profits award and is not at issue here. *See* 913 F.3d at 1071.

Likewise, Claim 15 of the '607 patent claims all systems in which streamer positioning devices steer streamers using the predicted position of the positioning device—a feature that improves the quality of the survey data. Ex. B, at 98 (PTX003 at col. 12); *see also id.* at 93 (PTX003 at col. 2) (“[N]oise in marine seismic data associated with streamer position overcorrection and streamer positioning errors can be significantly reduced.”).

Claim 18 of the '520 patent claims an apparatus that uses steerable streamers in three modes—feather-angle mode, streamer-separation mode, and turn-control mode. Ex. B, at 76 (PTX001 at col. 12). Claim 18 is practiced by the use of any of those modes. *See* Amended Memorandum and Order on Motions for Summary Judgment, Dkt. 365, at 59-63 (June 26, 2012). Claim 19 narrows Claim 18 to cover only feather-angle mode. Ex. B, at 76 (PTX001 at col. 12).

Feather-angle mode is “a control mode that attempts to set and maintain each streamer in a straight line offset from the towing direction by a certain feather angle.” Memorandum and Order on Claim Construction, Dkt. 120, at 24-25 (July 16, 2010). Feather-angle mode is the mode typically used during data collection and permits the streamers to attain an angled, parallel configuration despite the presence of currents or other potential disturbances. Ex. A, at 516-517. By maintaining proper spacing between streamers even in the presence of currents, feather-angle mode allows surveyors to reduce the amount of infill (gaps in the data collection) and acquire high-quality data in typical conditions. *Id.* at 195-196, 516-517.

Streamer-separation mode is “a control mode that attempts to set and maintain the spacing between adjacent streamers.” Memorandum and Order on Claim Construction, Dkt. 120, at 28 (July 16, 2010). This mode involves steering the streamers to maintain a certain distance between

each other, which prevents the streamers from getting tangled in difficult conditions, such as during bad weather. Ex. A, at 514-515, 1025.

Claim 23—the claim central to this motion—narrowly claims a turn-control mode directed to a particular way to steer streamers between data acquisition passes (or lines), when the vessel is turning and data typically are not collected. Ex. B, at 76 (PTX001 at col. 12). Claim 23 recites a particular series of steps “wherein streamer positioning device(s) generate a force in the opposition direction of a turn and then directing each streamer positioning device to the position defined in the feather angle mode.” Memorandum and Order on Claim Construction, Dkt. 120, at 26-27 (July 16, 2010). Throwing out the streamers helps maintain the tension in each array, thereby reducing the duration of the turn. Ex. A, at 1324-1326.

The mode covered by claim 23 is not practiced during data acquisition passes when survey data are collected. *See* Ex. B, at 75-76 (PTX001 at col. 10, 12); Ex. A, at 1324-1326. Unlike feather-angle mode, claim 23 turn-control mode is a narrow feature that does not affect the quality of the data; instead, it can reduce the time it takes a vessel to turn between data acquisition lines. Ex. B, at 71, 75 (PTX001 at col. 2, 10); *see also* Ex. A, at 1610-1611 (explaining how other aspects of steering affect data quality). Claim 23 addresses one of multiple approaches for turning between data acquisition lines. Ex. A, at 295, 396-397, 561-562, 2113, 3917-3919.

b. On June 29, 2012, this Court granted summary judgment of infringement in WesternGeco’s favor on claim 18 of the ’520 patent under 35 U.S.C. § 271(f)(1). Memorandum and Order on Plaintiff’s Motion for Summary Judgment, Dkt. 372 at 9-10 (June 29, 2012). Two months later, after trial, a jury found that ION infringed claims 19 and 23 of the ’520 patent, claim



15 of the '967 patent, claim 15 of the '607 patent, and claim 14 of the '038 patent, under both 35 U.S.C. § 271(f)(1) and (f)(2). Verdict Form, Dkt. 536, at 1-2 (August 16, 2012). It further found that ION had infringed claim 18 of the '520 patent under Section 271(f)(2). *Id.* at 2.

WesternGeco sought reasonable royalty damages for the alleged infringement of all six claims and lost-profits damages for the alleged infringement of the five Bittleston claims. With respect to lost profits, WesternGeco identified ten surveys that it claims it would have sold but for ION's infringement of the claims of the '520, '967, and '607 patents. Ex. B. at 1 (Gunderson Demonstrative at 19), at 35, 40-43, 47-48, 52-53, 55 (Sims DEMO 034, 039-042, 046-47, 051-052, 054).<sup>2</sup> Its theory for lost profits was simple: the lost profits surveys required "lateral steering," and, without infringement, WesternGeco "was the only provider that could provide lateral steering," so "WesternGeco would have made those sales." Ex. A, at 2378; *see also* Ex. A, at 1867, 2460-2461, 2464, 2524. WesternGeco's damages expert presented evidence from depositions, tender invitations, and other survey documentation that the customers for each of the ten identified surveys required "lateral steering." Ex. A, at 2378-2387, 2391, 2395-2399; Ex. B, at 34-43, 47-48, 52-53, 55 (Sims DEMO 033-042, 046-047, 051-052, 054). ION countered this testimony by presenting evidence that purchasers would often consider non-steering solutions even when they expressed a desire for steering, Ex. A, at 4027-4028, 4529-4530, and that purchasers

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<sup>2</sup> WesternGeco sought lost profits for twenty-five surveys, ten of which it asserted were attributable to ION. WesternGeco did not contend that ION should be held liable for lost profits from the remaining fifteen surveys. Rather, it claimed that those surveys were attributable to Fugro, which settled with WesternGeco.

went out of their way to promote competition in the market and would not have accepted a WesternGeco monopoly, *id.* at 4041, 4320. Critically, *WesternGeco did not present evidence that any of the surveys required turn-control technology, let alone the technology of claim 23 of the '520 patent.*

The jury awarded WesternGeco \$93.4 million in lost profits based on its failure to win contracts for ten seismic surveys. Verdict Form, Dkt. 536, at 8 (August 16, 2012). The jury also awarded WesternGeco \$12.5 million in reasonable royalties (which this Court later increased to \$21.9 million). *Id.*; *see also* Order, Dkt. 686, at 3 (April 30, 2014). The jury was not asked to, and did not, allocate those damages among the infringed patent claims. Verdict Form, Dkt. 536 (August 16, 2012); *see also* 913 F.3d at 1073.

c. ION appealed. The Federal Circuit reversed, holding that the Patent Act does not entitle WesternGeco to extraterritorial lost profits. *See* 791 F.3d 1340 (Fed. Cir. 2015). The Supreme Court ultimately reversed that holding, agreeing with this Court that WesternGeco's lost-profits award constituted a permissible domestic application of 35 U.S.C. § 284. It remanded the case to the Federal Circuit for further proceedings. *See* 138 S. Ct. 2129, 2139 & n.3 (2018).

d. As this action was proceeding in the courts, the patents asserted by WesternGeco were being challenged before the Patent Trial and Appeal Board (PTAB). In 2014, non-party Petroleum Geo-Services, Inc. (PGS), filed petitions for *inter partes* review on various claims of the '038, '967, '607, and '520 patents. The PTAB instituted review as to various claims of the '967, '607, and '520 patents but declined to review the '038 patent. ION sought and was granted the right to intervene on a "spectator" basis in the trials adjudicating the claims asserted against it.

In December 2015, PGS prevailed on all instituted challenges, and the PTAB determined that multiple claims of each of the '967, '607, and '520 patents were invalid. *See Petroleum Geo-Services Inc. v. WesternGeco LLC*, Nos. IPR2014-00687, IPR2014-00688 & IPR2014-00689 (Dec. 15, 2015). As is relevant here, of the six claims found to be infringed in this action, it determined that four were invalid: claims 18 and 19 of the '520 patent, claim 15 of the '967 patent, and claim 15 of the '607 patent. The two surviving claims were claim 14 of the '038 patent, which undisputedly could not support the lost-profits award, and claim 23 of the '520 patent, a narrow claim that is the focus of this motion. *See* 913 F.3d at 1071.

WesternGeco appealed the PTAB's decisions, and the Federal Circuit affirmed the PTAB's invalidation while this case was pending before the Supreme Court. *In re WesternGeco LLC*, 889 F.3d 1308 (Fed. Cir.), *petition for certiorari denied*, No. 18-861 (U.S. Feb. 19, 2019). A petition for rehearing was denied on July 16, 2018, and a petition for certiorari was denied on February 19, 2019. By operation of law, the Federal Circuit's affirmance of the PTAB's judgment estops WesternGeco from recovering for their infringement. 35 U.S.C. § 318(b); *Fresenius USA, Inc. v. Baxter International, Inc.*, 721 F.3d 1330, 1341-1342 (Fed. Cir. 2013); *XY, LLC v. Trans Ova Genetics, L.C.*, 890 F.3d 1282, 1294 (Fed. Cir. 2018); 913 F.3d at 1075.

e. On remand from the Supreme Court, the Federal Circuit ordered supplemental briefing from the parties addressing what relief was appropriate in light of the Supreme Court's decision. WesternGeco argued that no remand to this Court was necessary despite the PTAB's invalidation of four of the five claims that the jury considered in awarding lost profits. In support of that argument, WesternGeco pointed to testimony by both parties' damages experts, which, it

contended, showed that the damage theories did not depend on which claims were valid and infringed. WesternGeco Supp. Br. 2, No. 13-1527 (Fed. Cir. filed Aug. 17, 2018).

At oral argument, the Federal Circuit repeatedly asked WesternGeco for evidence from the record to support a particular proposition: that claim 23 of the '520 patent was necessary to secure the survey contracts that were the basis of the lost profits award. *See, e.g.*, Ex. C (11/16/2018 Oral Arg. Tr.), at 8:6-11 (Judge Dyk: “[T]ell me where in the record there is testimony by a technical expert who says that this claim 23 technology, as opposed to the technology of the invalidated claims, is necessary to get the survey contracts. Where would I find that in the record?”); *id.* at 9:14-10:1 (Judge Dyk: “But the trouble is there isn’t any—would it be fair to say there isn’t any testimony directly—that directly says that the claim 23 technology is necessary for the surveys? . . . But try—just try to answer my—is it true that there isn’t any testimony in the record specifically tying claim 23 technology, in those terms, to something that’s essential for the surveys?”); *id.* at 10:14-17 (Judge Dyk: asking whether “there is material in the record showing that the technology that is covered by claim 23 is necessary for the surveys”); *id.* at 40:2-4 (Judge Dyk, to ION: “Now, who testified as to the need for the turn control mode technology for the surveys as to which lost profits were awarded?”); *id.* at 63:13-20 (Judge Dyk, to counsel for WesternGeco: “[Y]ou keep talking about alternatives. I’m not sure that [the absence of non-infringing alternatives] is the question. The question is whether this additional feature was necessary to perform the surveys. To be sure, if there were an alternative, that would be relevant, but I don’t think the absence of an alternative to that is necessarily dispositive because you might not need the feature at all.”). Unable to identify the requested evidence at argument, WesternGeco sought leave to submit a post-

argument letter that would “cite[] what [it] think[s] are the best transcript cites that we have from the record” establishing the necessity of claim 23. *Id.* at 61:18-21.

WesternGeco’s post-argument efforts to find evidence that the claim 23 technology was necessary to conduct the surveys were unsuccessful. In its supplemental letter, WesternGeco did not identify anything that established, or even purported to establish, that claim 23 was necessary to secure the surveys. *See* Ex. D (WesternGeco Supplemental Letter) at 1-2 (citing evidence that purports to address a “link” between claim 23 and lateral steering, turn control, and line changes; “demand for” and “benefits from” turn control; and the “absence of acceptable non-infringing alternatives” as to the entire lateral steering system—the subject of the invalidated claims).

f. On January 11, 2019, the Federal Circuit issued its decision. The court remanded to allow this Court to consider, in the first instance, whether a new trial is warranted as to lost profits damages. 913 F.3d at 1075.<sup>3</sup> At the outset, the court made clear that, in light of the PTAB’s invalidation decision and the Federal Circuit’s affirmance, “the only remaining claim that could support the lost profits award is ’520 patent claim 23.” *Id.* at 1073; *see also id.* at 1071. The court explained that “when a jury was told it could rely on any of two or more independent legal theories, one which was defective, the general verdict must be set aside.” *Id.* at 1073 (internal quotation marks and citation omitted). Accordingly, the lost profits award can only be sustained “if the jury *must have* found the technology covered by ’520 patent claim 23 was *essential* for performing the surveys.” *Id.* at 1074 (emphasis added). Put otherwise, “the award can be sustained if there was

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<sup>3</sup> The Federal Circuit affirmed as to the reasonable royalty award on the basis that it was final. 913 F.3d at 1072. Accordingly, that award—paid by ION for patent claims that are invalid and never should have issued—is not implicated by the arguments here.

*undisputed evidence* that the technology covered by '520 patent claim 23 was *necessary* to perform the surveys.” *Id.* (emphasis added).

The Federal Circuit expressly rejected the two pieces of evidence on which WesternGeco relied in arguing that infringement of claim 23 would itself support “the full amount of the lost profits award,” without the need for a remand. 913 F.3d at 1074-1075. As to the testimony of Mr. Gunderson, the defense damages expert, that his analysis assumed the infringement of at least one valid claim, the court explained that this statement was simply a basic assumption for patent damages calculations, and “was directed to showing that WesternGeco was not entitled to the claimed lost profits for infringement based on *any* of the patents.” *Id.* at 1074. Accordingly, contrary to WesternGeco’s argument, the court “d[id] not interpret this testimony as supporting the theory that the entirety of the lost profits could be supported by infringement of any one Bittleston patent claim.” *Id.*

The Federal Circuit similarly rejected WesternGeco’s reliance on its damages expert, Mr. Sims, who testified that his understanding was that “each of the patents” at issue would prohibit ION from selling lateral steering technology. 913 F.3d at 1074-1075. The court reasoned that “it is clear that Sims was simply making an assumption,” not “an independent determination.” *Id.* at 1074. Indeed, Mr. Sims, a damages expert, disclaimed independent knowledge “as to the scope of the patents.” *Id.* at 1074-1075. Accordingly, the court concluded that his testimony, which did not address claim 23 in particular, “cannot support the jury award on lost profits.” *Id.* at 1075.

The court also rejected WesternGeco’s suggestion that the jury was generally informed that “the lateral steering technology was required for the surveys at issue and that claim 23 covers part

of that technology.” 913 F.3d at 1075. It reasoned that lateral steering technology “was also reflected in the four other, now-invalid, asserted claims—’520 patent claims 18 and 19, ’967 patent claim 15, and ’607 patent claim 15.” *Id.* For the lost profits award to survive the invalidation of those claims, the court concluded, “the record must establish that there was no dispute [at trial] that the technology covered by claim 23, independent of the technology covered by the now-invalid claims (e.g., ’520 patent claim 18 and 19), was required to perform the surveys at issue.” *Id.*

Noting that this Court “is in a better position to consider the issue in the first instance,” the Federal Circuit remanded. 913 F.3d at 1075. The Federal Circuit set out the precise inquiry for remand, holding that “[t]he district court may deny a new trial on lost profits if, but only if, it concludes that WesternGeco established at trial with undisputed evidence that ’520 patent claim 23 covers technology necessary to perform the surveys upon which the lost profits award is based.” *Id.* It emphasized that the determination must be made “on the present record.” *Id.*

The Federal Circuit also noted that, “if the district court orders a new trial on damages, ION may present arguments concerning apportionment at the new trial” to limit profits to those attributable to the patented technology, rather than other aspects of the surveys. 913 F.3d at 1073.

### **SUMMARY OF ARGUMENT**

WesternGeco cannot demonstrate that it “established at trial with undisputed evidence that ’520 patent claim 23 covers technology necessary to perform the surveys upon which the lost profits award is based.” 913 F.3d 1067, 1075 (Fed. Cir. 2019). WesternGeco made the strategic decision to argue throughout trial and on appeal that the ten lost profits surveys required “lateral steering,” which only its patented solution provided. But “lateral steering” encompasses much

more than claim 23; in fact, unlike the broad invalidated claims that covered general lateral steering, claim 23 covers a narrow set of steering operations during turns that does not affect data quality. WesternGeco cannot show that a jury must have found that claim 23, “independent of the technology covered by the now-invalid claims,” *id.*, was necessary for the lost profits surveys.

There simply was no evidence that claim 23 was necessary to conduct the ten surveys at issue. Indeed, the evidence affirmatively demonstrates that claim 23 was *not* necessary to perform the surveys. *First*, the record establishes that there are other turning techniques that do not infringe claim 23. *Second*, the evidence shows that the ultimate customers whose purchasing decisions are relevant to this question care a great deal about the quality of the data gathered—which is affected by non-protected aspects of lateral steering—and relatively little about turn control. *Third*, WesternGeco’s witnesses emphasized the role of lateral steering as a general requirement, and they did not explain the importance of its turn control, let alone the particular turn control of claim 23, to those making the purchasing decisions. *Finally*, the evidence shows that, where the survey purchasers explained why they wanted lateral steering for their surveys, they explained that aspects of lateral steering unrelated to turn control drove their demand.

Following the invalidation of its broad lateral steering claims, WesternGeco had three opportunities before the Federal Circuit to establish the necessity of claim 23’s technology, and it failed each time. In its Federal Circuit briefing, it argued that the parties’ damages experts implicitly conceded that each of the five claims independently supported the lost profits award—a position the Federal Circuit rejected emphatically. At oral argument, WesternGeco could not identify



any evidence that claim 23 was necessary, instead primarily arguing to the panel that it was misapprehending the applicable legal test. Finally, WesternGeco offered at argument to collect and cite the best evidence from the record establishing the necessity of claim 23 in a post-argument letter. But in that letter, WesternGeco could only muster evidence that showed, at most, that claim 23 was useful and that customers desired lateral steering in general. That evidence simply did not establish the necessity of claim 23 for the ten surveys at issue.

For these reasons, WesternGeco has failed to demonstrate, with undisputed evidence, that the jury must have found that claim 23's technology was necessary for the ten lost profits surveys. Therefore, under the Federal Circuit's ruling, a new trial on lost profits damages is required.

## **ARGUMENT**

### **I. A NEW TRIAL ON LOST PROFITS DAMAGES IS REQUIRED IN THIS CASE**

The question the Federal Circuit directed this Court to consider on remand is whether “WesternGeco established at trial with undisputed evidence that ’520 patent claim 23 covers technology necessary to perform the surveys upon which the lost profits award is based.” 913 F.3d 1067, 1075 (Fed. Cir. 2019). Because the answer to that question is a resounding “no,” a new trial is necessary.

In this case, the jury awarded lost profits based on a finding of infringement of multiple claims covering a lateral steering system. The landscape has changed—rather than a robust portfolio of claims broadly covering lateral steering systems that WesternGeco argued were required for the ten lost profits surveys, all that remains is claim 23 of the ’520 patent, which covers a narrow feature unrelated to data collection. *See* 913 F.3d at 1071, 1073, 1075. The record does

not establish that this narrow feature was necessary to the survey customers such that the ten lost profits surveys could not be performed without it.

To prove lost profits, a patent owner must show “a reasonable probability that he would have made the asserted sales ‘but for’ the infringement.” *Grain Processing Corp. v. American Maize-Products Co.*, 185 F.3d 1341, 1349 (Fed. Cir. 1999). That showing “requires a reconstruction of the market, as it would have developed absent the infringing product, to determine what the patentee would have made.” *Id.* at 1350. At trial, the jury was tasked with the “hypothetical enterprise” of assessing what the customers using DigiFIN-enabled surveys would have done in a hypothetical world where they were unable to use any of the technology covered by claims 18, 19 and 23 of the ’520 patent, claim 15 of the ’967 patent, and claim 15 of the ’607 patent. *See id.* WesternGeco argued that the purchasers of the ten surveys at issue mandated lateral steering—the general ability to steer streamers during a survey that is covered by the later-invalidated claims. Accordingly, WesternGeco contended, and the jury apparently agreed, that, in the absence of ION’s infringement, the purchasers would have selected WesternGeco to conduct the surveys because it would have been the only company that could offer lateral steering. *See* Ex. A, at 204, 1646-1648, 1868, 2378, 2460-2461, 2464, 2524; *see also* Ex. B, at 33-43, 47-48, 52-53, 55 (Sims DEMO 032-042, 046-047, 051-052, 054).

But the Federal Circuit held that evidence establishing the necessity of lateral steering technology as a general matter was insufficient to support the lost profits award. 913 F.3d at 1075. The broadest and most significant claims now have been invalidated; if it is possible that any part of the jury’s award rested on any of those invalidated claims, and not claim 23, the award cannot

stand. The award can stand if, and only if, there is undisputed evidence that the jury necessarily found that the surveys could not have been performed without the specific technology covered by claim 23. *Id.*; see generally *Verizon Services Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1310 (Fed. Cir. 2007) (“[W]here the jury rendered a single verdict on damages, without breaking down the damages attributable to each patent, the normal rule would require a new trial as to damages.”). WesternGeco has not identified, and cannot identify, any such evidence.

**A. Claim 23 Technology Was Not Necessary To Conduct The Surveys Or To Win The Survey Contracts**

1. The record affirmatively establishes that the technology covered by claim 23 is not “required to perform the surveys at issue.” *See* 913 F.3d at 1075. Indeed, the record demonstrates that there are other approaches for turning steamers between data acquisition lines without steering that, while slower, were entirely feasible. *See, e.g.*, Ex. A, at 295, 396-397, 561-562, 2113. *A fortiori*, WesternGeco cannot make the necessary showing that the technology of claim 23 was required to perform the surveys. 913 F.3d at 1075.<sup>4</sup>

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<sup>4</sup> In fact, WesternGeco has admitted elsewhere that there were alternatives to the technology protected by claim 23. In seeking to avoid institution of an *inter partes* review proceeding as to claim 23, WesternGeco emphasized that the asserted prior art “recognizes the problem addressed by the claimed ‘turn control mode’, but provides an alternative—and mutually exclusive—proposed solution.” *Petroleum Geo-Services Inc. v. WesternGeco LLC*, No. IPR2014-00689, Paper 28, at 49 (Sept. 16, 2014). The PTAB accepted this argument and declined to institute trial, determining that the solution of the asserted prior art to the turning problem—steering “the vessel itself, as opposed to the towed streamers, to undertake a specific turn rate and radius”—was distinct from the “particular solution of ‘throwing out’ the streamers” recited in claim 23. *Petroleum Geo-Services Inc. v. WesternGeco LLC*, No. IPR2014-00689, Paper 32, at 40 (Dec. 15, 2014). Although WesternGeco’s representation is outside the record, it illustrates why there is no undisputed evidence establishing the opposite position in the trial record. And having successfully persuaded the PTAB of that position, WesternGeco is estopped from taking a contrary position before this Court. *See, e.g.*, *New Hampshire v. Maine*, 532 U.S. 742, 749 (2001).

More fundamentally, there is no record evidence that slower turns affect the quality of the data produced, let alone that they had such a substantial effect that the oil and gas companies would refuse to contract with a surveyor that is unable to offer faster turning by any mechanism, let alone the particular operations of claim 23. *See, e.g.*, Ex. A, at 1046-1047; 1610-1611 (explaining how other aspects of steering affect data quality). Given that the jury heard testimony that “the most important information for [the customers] was the quality of the seismic data” and that the customers considering competitive surveys simply “wanted to see if the data w[ere] as good” as WesternGeco’s, *id.* at 1046-1047, and even heard testimony from WesternGeco’s own expert as to the importance of data quality, *id.* at 2075 (stating that “data quality” is the “absolute number one” factor considered when buying seismic data), *see also id.* at 2077, 2097, WesternGeco cannot be heard to argue that a narrow feature unrelated to data quality undisputedly was necessary to perform the ten surveys.

2. What is more, there is evidence in the record that the claim 23 technology was not necessary to win the ten survey contracts at issue.

a. Despite presenting extensive evidence as to the ten surveys that underlie the lost profits award, including survey documentation that laid out customers’ requirements, WesternGeco presented no testimony that the claim 23 technology was required for those surveys. Instead, from the opening argument to the closing argument, WesternGeco focused on the customers’ requirement of lateral steering generally—a broad technology covered not by claim 23, but by claims that have since been invalidated. *See, e.g.*, Ex. A, at 204, 2380-2384, 2378-2385, 2391, 2395-2399, 5212-5213; Ex. B, at 2-65 (Sims DEMO 001-064).

Robin Walker, WesternGeco's director of marketing, testified at length as to why ION's customers, rather than WesternGeco, were selected to conduct surveys. In his testimony, Mr. Walker never stated that customers purchased the relevant surveys because of turn control or line changes, let alone that they did so because of the particular set of maneuvers covered by claim 23. *See* Dkt. 453, at 1606-1763 (July 31, 2012); Dkt. 454, at 1821-1925 (July 31, 2012). He did not even address claim 23. *See id.* Rather, in asserting that the customers considered the then-patented technology necessary, Mr. Walker referred to lateral steering generally *more than 100 times*. *See, e.g.,* Ex. A, at 1868 ("From what we have seen in the tender documents, what we have seen as a requirement, lateral steering is a must-have, and other qualifications are nice to have."); *see also, e.g., id.* at 1646-1648, 1666-1670, 1672-1675, 1676-1678, 1679-1680, 1683-1684, 1723, 1727, 1867. The notion that the jury found that WesternGeco lost the surveys at issue because of the necessity of the technology of claim 23, rather than the general lateral steering technology covered by the later-invalidated claims, is implausible and untenable.

Raymond Sims, WesternGeco's damages expert, relied on Mr. Walker's testimony, along with documentation for the ten surveys, to testify that lost profits should be awarded because the surveys at issue required "lateral steering." Ex. A, at 2378, 2460-2461, 2464, 2524. When addressing the ten surveys, Mr. Sims never addressed turn control or line changes, let alone the specific turn-control technology covered by claim 23. Ex. A, at 2378-2385, 2391, 2395-2399; Ex. B, at 33-43, 47-48, 52-53, 55 (Sims DEMO 032-042, 046-047, 051-052, 054). Indeed, in finding his testimony insufficient, the Federal Circuit noted that Mr. Sims disclaimed independent knowledge

“as to the scope of the patents.” 913 F.3d at 1074-1075. Rather, Mr. Sims focused on establishing that lateral steering generally was necessary for the surveys.

Critically, not only was there no evidence establishing the necessity of the claim 23 technology, there was evidence that customers insisted on lateral steering *for reasons unrelated to the turn-control mode covered by claim 23*. For example, the jury heard testimony that some customers required lateral steering to achieve certain streamer separation during data acquisition lines, *see e.g.*, Ex. A, at 2396-2397 (75 meter spacing), and other customers required lateral steering during data collection “to ‘fan’ the spread and control feather, reducing infill,” *id.* at 122 (PTX485 at FGRPROD1122528). In other words, the record contains affirmative evidence that customers required features protected by the invalidated claims, not the turn-control mode covered by claim 23.

In light of the evidence that other features were the customers’ focus, and in light of the absence of specific requirements of the particular turn control procedures of claim 23 in the tender documents on which the lost profits case relied, WesternGeco cannot present undisputed evidence that the claim 23 technology was necessary for *any* of the surveys, let alone *all ten* surveys—as would be required to sustain the jury’s lost profits award in light of the single verdict on lost profits damages. *See* 913 F.3d at 1075; *Verizon Services Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1310 (Fed. Cir. 2007).

**B. WesternGeco Has Not Identified The Requisite Record Evidence To Date, Despite Ample Opportunity To Do So**

Despite several opportunities to establish the necessity of claim 23's technology, WesternGeco has failed to point to any evidence, and certainly not the requisite undisputed evidence, that claim 23 was necessary to perform the surveys.

WesternGeco identified no such evidence in its briefs before the Federal Circuit. Instead, it relied on testimony by both sides' damages experts, which it interpreted to suggest that the jury found that each claim was necessary to the surveys. The Federal Circuit emphatically rejected that interpretation, explaining that the testimony "cannot support the jury award on lost profits." 913 F.3d at 1074-1075; *see* p. 11, *supra*.

During oral argument before the Federal Circuit, WesternGeco did not point to any evidence that claim 23 was necessary to perform the surveys, despite repeated requests from the panel. *See* p. 8-9, *supra*. Equally revealing, WesternGeco pleaded with the court to adopt a different standard, repeatedly resisting the question whether the claim 23 technology was necessary to the surveys. *See, e.g.*, Ex. C (Oral Arg. Tr.), at 5:8-6:5; 14:3-15:8; 18:1-11; 63:1-20. Indeed, WesternGeco was so determined to avoid this standard that, when the presiding judge probed whether the "claim 23 technology is necessary to the surveys," WesternGeco's counsel rather impudently accused the Judge of asking "the wrong question." Ex. C (Oral Arg. Tr.), at 14:15-22. Not surprisingly, the Federal Circuit disagreed. It rejected WesternGeco's view, and set out the demanding standard with clarity: "The district court may deny a new trial on lost profits if, but only if, it concludes that WesternGeco established at trial with undisputed evidence that '520 patent claim 23 covers technology necessary to perform the surveys upon which the lost profits award is based."

913 F.3d at 1075. WesternGeco’s reluctance to accept this standard is understandable: given the correct standard, which indisputably now governs the inquiry, a new trial plainly is necessary.

Finally, WesternGeco did not identify any evidence that claim 23 was necessary to perform the surveys in its post-argument letter, which it promised would contain what “[it] think[s] are the best transcript cites that we have from the record” establishing the necessity of claim 23. *See* Ex. C, at 61:16-21. Not a single piece of the evidence WesternGeco cited purported to establish—let alone succeeded in establishing—the necessity of claim 23 for the surveys. A close look at the evidence shows why, despite its best efforts, WesternGeco’s “best” available record citations fall woefully short.

*First*, WesternGeco’s post-argument letter pointed to testimony and exhibits that it claims addressed the “link between claim 23 of U.S. Patent No. 7,293,520, and lateral steering, turn control, and line changes.” *See* Ex. D (WesternGeco Supplemental Letter), at 1. Those pieces of evidence address the use of turn-control mode to steer streamers to reduce the duration of the turn between data acquisition passes (or lines). *See* Ex. A, at 528, 531-532, 1324-1326, 1327-1328, 3524-3525; Ex. B. at 71, 75 (PTX1 at 2:20-23; 2:59-63; 10:37-46 (’520 Patent)). At most, they support the proposition that the claim 23 technology could be used to increase turn efficiency. But that does not remotely satisfy the governing standard—whether “the technology covered by ’520 patent claim 23 was necessary to perform the surveys.” 913 F.3d at 1074-1075. While those pieces of evidence ascribe certain advantages to the technology, neither that evidence, nor evidence elsewhere in the record, undisputedly established that the surveys could not be performed without this particular approach to steering streamers during turns, or that this particular approach was a



non-negotiable requirement of the customers for the ten surveys. Accordingly, it cannot meet the exacting standard propounded by the Federal Circuit.

*Second*, WesternGeco’s letter cited testimony purportedly discussing “[t]he demand for, and benefits from, the technology of claim 23.” See Ex. D, at 1-2. Evidence as to the demand, again, does not address the question set out by the Federal Circuit. Demand does not equal necessity—that customers are willing to pay more for a car with an extra cup holder, for example, does not mean that customers would not purchase a car without the extra cup holder, or that a car needs the additional cup holder. In other words, demand for the claimed technology or increased turn efficiency generally does not demonstrate that the technology was *necessary* to perform the surveys.

The evidence WesternGeco cites addresses the efficiency of surveys that use lateral steering, including the efficiency gains of using lateral steering between data acquisition lines. *See e.g.*, Ex. A, at 281-283, 1610, 1615, 2215-2217, 2419-2423, 2779-2780, 3024-3025, 4115-4116; Ex. B at 116 (PTX006 at p. ION16363), at 120 (PTX45 at p. WG837). As an initial matter, the vast majority of the cited evidence does not suggest that turn control, or increased efficiency more generally, is necessary to perform surveys; rather, it merely discusses increased efficiency as one of many benefits of lateral steering. *See e.g.*, Ex. A, at 1610, 1615-1618, 2411, 2414-2424, 2779-2780, 3024-3025. Moreover, lateral steering enhances efficiency in numerous ways that are unrelated to the technology of claim 23, including by reducing the need to complete additional data acquisition lines to address infill—asserted to be the “most important” benefit of lateral steering. Ex. A, at 2215. Additionally, even the efficiency gains associated with reducing turn duration are

unhelpful to WesternGeco, as they benefit surveyors “who don’t make money turning around,” rather than the survey customers whose decisions are relevant to lost profits. Ex. A, at 1615; *see also id.* at 2215-2217. Finally, even setting aside those dispositive deficiencies in WesternGeco’s evidence, the vast majority of it does not address the pertinent question of the ten surveys that were the basis of the lost profits award. *See e.g.*, Ex. A, at 320-323, 1018-1022.<sup>5</sup> WesternGeco has no evidence whatsoever—let alone the requisite undisputed evidence—that the Claim 23 technology was necessary to perform those ten surveys.

*Third*, WesternGeco’s post-argument letter pointed to citations that relate to the purported absence of acceptable non-infringing alternatives to lateral steering technology (not claim 23’s turn-control technology). *See* Ex. D, at 2. Again, even if this evidence pertained to claim 23 technology, rather than lateral steering more broadly, it could not meet the Federal Circuit’s standard. As Judge Dyk emphasized at argument, “[t]o be sure, if there were an alternative, that would be relevant, but I don’t think the absence of an alternative to [the claim 23 technology] is necessarily dispositive because you might not need the feature at all.” Ex. C, at 63:16-20; *see also id.* at 18:9-11 (Judge Dyk) (stating that “[t]here doesn’t have to be an alternative” because “[i]t may be that the claim 23 technology simply just isn’t necessary at all”). That is precisely why WesternGeco must establish that “there was undisputed evidence that the technology covered by ’520

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<sup>5</sup> The sole testimony that appears to relate to one of the ten lost-profits surveys is Mr. Walker’s statement that “lateral steering” was necessary to obtain data around a coral reef obstruction. Ex. A, at 1681-1683. Critically, that testimony does not indicate that claim 23 was used to do so (Mr. Walker never addressed claim 23), let alone demonstrate that the claim 23 technology was necessary to perform the survey. *See id.* Indeed, WesternGeco recognized other methods of obtaining data around obstructions. Ex. A, at 2092-2093 (obtaining data near an obstruction without lateral steering), 2094 (using lateral steering to obtain data around an obstruction that *does not* practice claim 23).

patent claim 23 was necessary to perform the surveys”; if not, a new trial is necessary. 913 F.3d at 1074; *see also id.* at 1075 (same).

What is more, the portions of the record WesternGeco identifies address only whether other streamer steering devices offered by third parties (specifically, the Nautilus and E-Bird) constituted non-infringing alternatives with lateral steering, not whether alternatives to *the technology of claim 23* existed. Ex. A, at 2288-2296, 1072-1083, 1246, 2209-2210, 4208-4213; Ex. B, at 117-118 (PTX006 at pp. ION16365-66). That, however, is not enough: the Federal Circuit stated that “the record must establish that there was no dispute that the technology covered by claim 23, *independent of the technology covered by the now-invalid claims* (e.g., ’520 patent claim 18 and 19), was required to perform the surveys at issue.” 913 F.3d at 1075. Because the broad and now-invalidated patents covered key features of the entire lateral steering system, WesternGeco’s citations about the Nautilus and E-Bird cannot establish the absence of available non-infringing alternatives to claim 23.

In short, WesternGeco has tried time and again to find the best record support for the necessity of the claim 23 technology. It has not been able to do so—despite submitting a letter that it offered for this very purpose. WesternGeco has come up empty handed because no such evidence, let alone undisputed evidence, exists. A new trial is necessary.

### **CONCLUSION**

The motion for a new trial on lost profits damages should be granted.

Respectfully submitted,

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By: /s/ Collin J. Cox

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**Certificate of Service**

I certify that on February 19, 2019, a true and correct copy of the foregoing was served on the counsel of record through the Court's electronic filing system.

/s/ Collin J. Cox

Collin J. Cox